

90/06 01

B·A·R·G NEWS

JUNE 1990



© Monthly Newsletter of the
Ballarat Amateur Radio Group

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90/06 02

MINUTES OF GENERAL MEETING HELD 25th MAY 1990.

MEETING OPENED by President Gordon VK3 KGC at 7.50pm with 61 members and visitors in attendance.

APOLOGIES VK3 SE, TI, DKJ, CFH, DS, KG, DIR, NIZ, KQQ, ATA.

MINUTES of previous meeting as circulated were confirmed after 2 errors in apologies were rectified. VK3 DS instead of GS and VK3 NMC instead of MMC. KAW/BNC.

CORRESPONDENCE IN Notice of S.E.R.G. Convention Mt. Gambier 9th & 10th June.
Notice of Western Zone WIA AGM May 26th at Lake Bolac.
Letter from John CFH apologising for non attendance at next 4 meetings. John will be in Alice Springs and hopes to set up schedules with members on 7070 & 14170.

CORRESPONDENCE OUT Ballarat Courier thanks for donation.
WIA Western Zone re proposed repeater on Ben Nevis.

TREASURERS REPORT General a/c \$538.15. VS&L a/c \$2424.15.
Accounts passed for payment \$170.89. KGL/TOM.

EDUCATION Ian AXH reported that the first exams conducted by the Club went very smoothly with 21 people sitting.
The next examination will be Sunday 15th July. Applications close 8th July. Details from Ian AXH via Box 216E, B/ratEast P.O.

TECHNICAL The new power supply for RBA will be completed and hopefully installed this month. RBU has been rebuilt and is nearly ready for installation on Mt Hollowback.
Dick AEX reported that the proposed repeater on Mt. Ben Nevis is being dealt with by VTAC and we should receive written information shortly.

QSL BUREAU manager Jeff PAP has not received any inward cards this month.

GENERAL BUSINESS Don't forget 2mtr scramble Sunday night. Listen RBA at 7.50pm.

MEETING CLOSED 8.15pm.

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73s Jim CFB.

B.A.R.G. ANNUAL GENERAL MEETING WILL BE HELD ON 29th JUNE 1990 at the BALLARAT EDUCATION CENTRE, Hopetoun St, Ballarat. 7.30pm.

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THE ANNUAL JUNK SALE was conducted by George DOK assisted by Bob BNC a large variety of items changed hands at bargain prices and a good time was had by all plus a profit, to the Club.

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90/06 03

PRESIDENT'S REPORT 1989-90

It is with great pleasure that I submit my report for the year 1989-90. The year has seen a major change in the conduct of our hobby with the development of conducting examinations from the D.O.T.C. to the Amateur ranks themselves. Our Club has taken an active part in this change being involved with the W.I.A. (Victorian Division), through our Education Officer, Ian VK3AXH, and myself meeting with the W.I.A. in Melbourne to consider the conducting of exams. This resulted in us conducting one set of exams in May this year.

The Club has also become involved directly, again through Ian, to become examiners in our own right and intend to conduct our first set of exams in mid July. The Club has again been involved in education by holding a Novice course to bring new participants into our hobby. Our thanks go to Ian for the conducting the course, Bob VK3BNC, Reg VK3CAZ and Brian VK3KQB for helping with other lectures. It is pleasing to see some of the classes getting licences before the course has even finished and we wish Good Luck to the rest of the group.

Once again, the highlight of the year was the running of our annual Hamvention under the leadership of Kevin Hughes VK3WN. This has now become a recognized calendar date on the Victorian Amateur's Year, as each year it becomes bigger and better. This is because of the dedication and leadership of Kevin and the willingness of other Club members to make it such a success. Long may it grow. Our thanks must go to those ladies who do such an excellent job in the preparation of lunches and looking after the other catering.

The Club meetings have been well attended throughout the year with most of our speakers coming from the Club members. These have been of an educational nature where those newer (and many older members) have learned more about the practical side of our hobby. I thank all those members who have contributed knowledge and/or asked questions.

Once again our May meeting was highlighted by the Auction of preloved gear and supply of parts. This is always a successful night. Thanks to George VK3DOK for his auctioneering skills. Many people are satisfied with the conversion of old junk into money, while others are happy to convert money into new junk.

The year has seen the Technical Committee and others through Dick VK3AEX replace the 2M Repeater and get under way the replacement power supply. You will know how successful this has been from the comments other users have made.

This year has also seen the introduction of a regular 2M scramble on Sunday after the monthly meeting. With a few modifications to the rules this has been a most successful venture and it is envisaged to improve the competition in the coming year and the Club looks for more participants in the future.

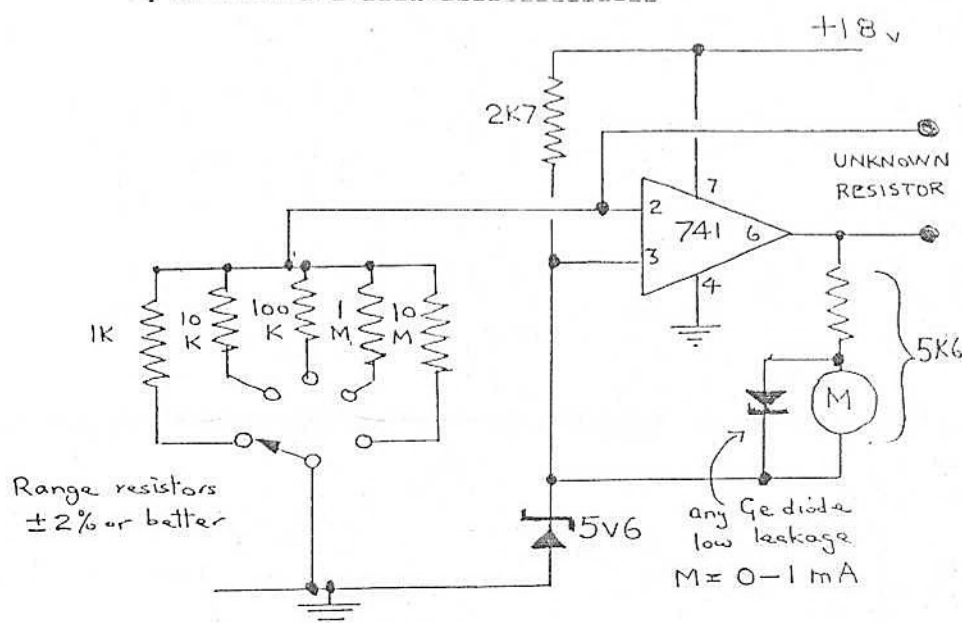
I would like to thank the various members of the Club who have held office in the Club and to the members of the Executive, Secretary - Jim, Treasurer - Harry and News Editors - Bob and Harry for the work throughout the year and wish the incoming Executive and Committee Good Luck for the next year.

I believe the Club to be in a sound financial position and that there are no reasonable grounds to believe that the Club will not be able to pay its debts as they fall due or to continue to fulfil its objectives in the future.

Gordon Cornell VK3KGC
PRESIDENT

90/06 04

A LINEAR SCALE RESISTANCE METER



If you don't have access to a DVM or similar instrument and you are fed up with the cramped scale on the resistance ranges of your multimeter you might like to build this. It will cover between about 100 ohms and 10 Megohms. Below 100 ohms it is increasingly inaccurate so be warned. A different meter can be used but in that case adjust the series resistor so that at f.s.d the voltage drop across the meter and the resistor is equal to the zener voltage. It should need no calibration but if the zener is not exactly 5V6 then the series resistor may need to be "trimmed" and this can be done by using exactly similar values of range resistor and "unknown" resistor and trimming the meter multiplier to give f.s.d. If the supply drops below about 13 volts the meter will become inaccurate so watch the batteries.

If the meter is scaled 0 to 10 then the value can be read straight off and multiplied by the range factor to give the value of the unknown

73 de Reg VK3CAZ

SOLDERING ALUMINIUM

If you need to solder to aluminium you might like to try this suggested method.

The soldering of aluminium by normal means is prevented by the immediate oxidation of the surface and to overcome this place a spot of light oil on the point to be soldered and clean the surface through the oil using the abrasive with a slow movement in order to prevent air contact.

A "blob" of hot solder then applied (again through the oil) is reputed to 'take' immediately with a strong permanent and reliable joint as the result.

The person suggesting it says that it may sound a tricky process, but in actual practice proves quite simple and he further claims never to have had a failure in soldering to an aluminium chassis.

Certainly seems to offer a neater method than my time honoured method of "scratching" through a pool of molten solder with a scriber, a method which does do the job but looks a little untidy afterwards and makes a "muck" of the scriber

VK3CAZ

90/06 05

Here it is, the end of another B.A.R.G. year and the Annual General Meeting is with us and a number of items are still not completed.

One item I had hoped to have completed this year was to obtain for the Club a new set of Clubrooms at a reasonable cost. Despite looking, I have not been able to achieve this aim, so we still have to rely on Club members to store our library and club property. Our thanks go to these people for their continued support for filling their garages etc.

As it is now A.G.M. time it is your responsibility to see that all committee positions are filled, do not leave it to those few to continue to run your club. Please notify the Secretary in writing of your intention to nominate for positions as soon as possible so they will be ready for the A.G.M.

I wish to say that I have enjoyed my year as President and thank you for the support you have given me through the year. If you give the new President the same support and more, then the Club can only expand and become more enjoyable for all members.

The Club needs your support in nets, awards and publicity, but enjoys your support when helping other members, which I find most rewarding and proud to have your comradeship.

Gordon VK3KGC

BOOK REVIEW.

THE RADAR WAR.

Germany's Pioneering Achievement 1904-45.

Author. David Pritchard. Publisher Patrick Stephens London.

A foreword is provided by Professor R.V.Jones author of "The Secret War" which was later made into the T.V. series of the same name.

Well if your are one of those people who believed that Radar originated in Great Britian then this book is for you.

An interesting piece of work with just enough technical content to show principles and at the same time let you see how both sides were developing and counter developing Radar in its many forms along with radio location technique. The moves and counter moves to gain tactical advantages coupled with intrigue on the one hand and complete lack of co-operation between the German high command on the other all adds up to one of those books that you know you have to finish.

Once again reference is made to the radio amateur as a ready source of technical operator that the allies were able to draw on which were not available in Germany due to Hitler's suppression of such activities at that time.

Another interesting item is the use of "Yagi" antennas long before they were developed by Dr.Yagi in Japan.

This book does compliment Dr.Jones "The Secret War" and provides an insight into the "other side". There are quite a number of surprises throughout this book and I recommend it to those who have an interest in the development of our art, (fox hunting of course).

I would like to thank Reg, VK3caz, who so generously loaned me this work.

90/06 06

QUESTION TIME

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These questions are provided as an informative exercise into your knowledge of subjects concerned with Amateur Radio.

The sources of the questions are books available to most operators and are such publication as:

ARRL Handbook Radio Communication Handbook RSGB etc.

I will try and keep the questions and subjects as general as possible so that other sources should be able to provide suitable answers.

ANSWERS TO LAST MONTH:

- 1) Electron, Negative and Proton, Positive.
- 2) Electron.
- 3) N-Type and P-Type.
- 4) Depletion Layer.
- 5) The Depletion Layer becomes thicker.
- 6) Forward biased Silicon drops 0.7 Volts, Germanium drops 0.3 Volts.
- 7) A diode is Reverse biased to conduct in its zener region.
- 8) The arrow in the symbol for an NPN transistor points outwards from centre.
- 9) The V_{be} (Voltage across the Base-Emitter junction) will indicate the type of transistor in circuit, 0.7 Volts for Silicon or 0.3 Volts for Germanium.
- 10) The greek symbol BETA.

The subject for this month ANTENNAS.

- 1) What is the impedance of a Folded Half-wave Dipole?
- 2) There are three types of elements in a Yagi antenna, what are they?
- 3) Two Yagi antennas with 6db gain each, are stacked to achieve optimum performance. What is the total gain of the stacked array?
a) 6db b) 12 db c) 3 db e) 9db f) 15 db
- 4) A vertical HF antenna is constructed using traps so that it will be resonant on 28Khz, 21Khz and 14Khz, two traps are required what are there resonant frequencies?
- 5) A transformer designed to couple 50 ohm coax to a 300 ohm balanced antenna is called what?
- 6) A 2 metre 1/4 wave vertical is required to operate around the 147.000 Khz part of the band with an SWR of approximately 1.3:1. When an SWR Bridge is connected it is found to have a SWR of 2.1:1 at 146.000 Khz, 2.8:1 at 147.000 Khz and greater than 3:1 at 147.900 Khz.
Is the antenna too long or too short?
- 7) A length of 50 Ohm coax is 1/4 wave length long at 7.00 Khz. A signal at 7.00 Khz is fed into one end of the coax. If the other end is shorted (ie inner connected to outer) what impedance is the signal feeding into?
a) 50 Ohms b) Short circuit c) Open Circuit d) 25 Ohms e) 100 Ohms
- 8) If the coax was 3/4 wavelength long what would be the impedance?
- 9) Various Coaxial cables have a Velocity Factor rating, it is a ratio of the velocity of electromagnetic energy in the cable and the velocity in what?
- 10) The term dBi is given to indicate the gain of an antenna with respect to an isotropic radiator. Because an isotropic radiator is not possible in reality a half wave dipole in free space is used as a reference. What is the dBi of a free space dipole?

Answers next month...

73's TON VK3TON/VK3HOT

IMPORTANT NOTICE.

What! This magazine has come a week early. I wonder why?

THE ANSWER.

The next meeting of the Ballarat Amateur Radio Group is the;-

ANNUAL GENERAL MEETING.
ANNUAL GENERAL MEETING.
ANNUAL GENERAL MEETING.

Consequently, it is important that you try to attend.
The club needs YOUR support, so please help.
Besides, if you do not come, someone else might do you in, and you wouldn't be able to defend yourself.

NOMINATION FORM

We wish to nominate for the
position of of B.A.R.G.
for the 1990/91 year.

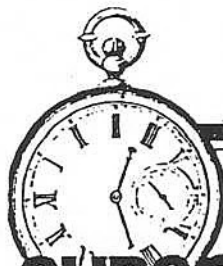
Nominator (Signature) Callsign

Seconder (Signature) Callsign

Signature of person nominated above

Date

* Please forward to the Secretary Jim VK3CFB.



IT'S TIME TO
RENEW YOUR
SUBSCRIPTION

YOUR SUBS. ARE NOW DUE. PLEASE SEE THE TREASURER A.S.A.P. WITH
YOUR MONEY.

90/06 08

Ballarat Amateur Radio Group

VK3BML

MEMBERSHIP FEES 1990-91

MEMBERSHIP FEES BECOME DUE AT THE ANNUAL GENERAL MEETING. PLEASE ASSIST THE CLUB BY PAYING PROMPTLY TO THE TREASURER HARRY HEKKEMA VK3KGL AT CLUB MEETINGS OR BY MAIL TO P.O. BOX 216E, BALLARAT EAST. THE SCALE OF FEES IS AS FOLLOWS:-

FULL MEMBER	\$10.00
FAMILY	\$15.00
STUDENT/PENSIONER	\$ 5.00
LIFE MEMBER	NIL
ASSOCIATE	\$ 7.50

NOTE: ASSOCIATE MEMBERSHIP IS A NEWSLETTER SUBSCRIPTION ONLY.

TO ENABLE ACCURATE RECORDS TO BE KEPT PLEASE COMPLETE THE FOLLOWING INFORMATION AND RETURN IT WITH YOUR SUBSCRIPTION.

NAME _____ CALL SIGN _____

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MEMBERSHIP DESIRED FULL/FAMILY/STUDENT-PENSIONER/ASSOCIATE/LIFE

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	Harry Hekkema	VK3KGL	357563	391001

PEPEATERS: VK3RBA - 146.750 Voice. Mt. Buninyong. (Ch.3)
 VK3RBS - 146.900 Voice. Smeaton Hill. (Ch.6)
 VK3RPC - 147.575 Packet. Mt. Buninyong.

CLUB NET : On 3.610 Mhz. SSB +/- QRM.
 Every Thursday at 8 PM.

MEETINGS : Held every last Friday of
 month at 7.30 PM. in the
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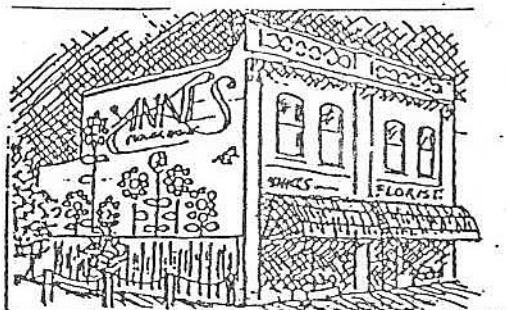
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